

Remarks

This Preliminary Amendment accompanies a Request for Continued Examination and is responsive to the Final Office Action mailed by the Office April 5, 2007. The applicants requested a telephonic interview from the Office and the interview was conducted on April 26, 2007. The summary of this interview is presented herein. As a result of the interview and a subsequent advisory action from the Office, the applicant submits the above-listed amendments to the claims and presents the following arguments. The applicant submits that the claims are in condition for allowance.

Summary of Telephonic Interview

The applicants express their appreciation to the Examiner for hosting the telephonic interview and for being available at such short notice. During the interview the applicants discussed claims 41 and 63 in view of United States Patent Number 6,385,454 issued to Bahl.

With regards to claim 41, the applicants reiterated their previous arguments stating that the claimed invention involves collecting call processing or location related events from the cellular network, together with the location of the mobile unit at the timing of these events. As described in the specification, this is a physical road location of the mobile unit as such as can be identified using a location based device such as a GPS device. This exact issue was raised in the previous response to the Office. From our understanding, the Office agreed that the applicants' argument distinguished the present invention from Bahl for at least the reason that Bahl did not describe the collection of location information pertaining to the physical location on an actual road.

With regards to claim 63, we also reiterated the previous points by the applicant that claim 63 combines cellular based events along with traffic volume information obtained from an external source. This traffic volume is the physical volume of traffic on the roads and does not refer to the cellular network transmission traffic.

The applicants' agreed to file a response to highlight these points for the Office's consideration.

Request for Extension of Time

Pursuant to 37 C.F.R. § 1.136, Applicant hereby petitions for an extension of time of one (1) month, extending the time for responding to Official Action to August 5, 2007. The request is included with this filing.

Request for Continued Examination

The Applicant submits along with this Preliminary Amendment, a Request for Continued Examination and pays the necessary fees.

Claim Rejections – 35 USC § 102

The Office has rejected claims 41, 48, 49, 52, 56, 63, 64 and 66 under 35 USC 102(e) as being anticipated by Bahl. The applicant respectfully overcome these rejections by presenting amendments and arguments. The arguments presented in the applicants January 12, 2007 response still apply and the applicants narrow the points of their arguments herein.

Bahl focuses on cellular network traffic and with the location of a cellular device within the topology of the cellular network. Bahl does not describe, suggest or teach the detection of physical location of a mobile unit on a physical road. The following passages from Bahl clearly demonstrate that Bahl focuses solely on the cellular network footprint and not on physical locations.

When Bahl discusses the route or path of a mobile unit, it refers to a path or route "through the cells of the network" as detailed below:

Column 5, lines 5-10 - "If the predicted path through a **network cell** is in a fringe area where the signals of adjacent cells overlap....."

Column 11, lines 36-39 – " FIG. 4 is a flow diagram illustrating the method of the invention for predicting the future route of the mobile **through the network**;"

Column 11, lines 54-55 – " The mobile's current path **through the cells of the network** is tracked in the buffer memory...."

When Bahl discusses location prediction, it is not referring to physical location but rather, when describing local prediction he refers to "the next cell to be crossed" and "the geometry of the cells in the network" and when he discusses global prediction he refers to "the mobile's path through the cells of the network" as detailed below:

Column 11 lines 36-59 - " I. The Hierarchical Location Prediction

According to the invention, the route of a mobile unit MU in the network of FIG. 1 is predicted by a hierarchical location prediction (HLP) method as illustrated in FIG. 4. As illustrated, the prediction of the movement of the mobile unit MU is carried out at two levels-i.e., local prediction (LP) and global prediction (GP). **LP provides a best estimate of the next cell to be crossed based on the instantaneous trajectory of the mobile unit MU and the geometry of the cells in the network**, while GP identifies the overall path in a database that best matches the route of the mobile thus far. Using the LP alone, a prediction of the next cell the mobile will move into can be made with a high degree of accuracy.

A. Global Prediction

For global prediction, a predetermined number of the mobile's previous routes are stored in the user profile memory 33 (FIG. 2) as the user's mobility patterns (UMP), which are indexed to the time the routes were taken by the mobile (FIG. 4). **The mobile's current path through the cells of the network is tracked** in the buffer memory 31 of the mobile unit MU (FIG. 2) as the user's

actual path (UAP). The UAP is composed of a sequence of recently crossed cells and a prediction of the anticipated next cell (if any) the mobile will enter."

When Bahl discusses traffic and congestion he refers to "signaling traffic" or "congestion caused by unexpected uneven traffic loading in cells" as detailed below:

Column 5 lines 5-14 - "...the network may elect to reserve bandwidth in **the cell that has the lesser amount of traffic**. When the mobile enters **the predicted cell with the higher amount of traffic**, the network will coordinate a handoff to the adjacent cell...."

Column 19 lines 28-31 - "... the invention results in a significant **reduction in signaling traffic** due to location updating"

Column 19 lines 34-40 - "Unexpected **growth of traffic in various cells can lead to local traffic congestion** resulting in the creation of "hot-spot" cells, that is **cells where the data traffic load substantially exceeds the design load**. Prior approaches that have been proposed to alleviate **congestion caused by unexpected uneven traffic loading in cells** include (1) Cell Splitting and (2) Channel Borrowing."

The present invention, in contrast to Bahl, discusses road traffic and physical road locations. The applicants state that this point has been made clear in the specification and on previous responses to the Office. However, the applicant has amended claims 41 and 63 with language to accent the physical nature of the location information.

Amended claim 41 explicitly teaches "gathering a sequence of events,, together with the **road location** of the mobile unit determined by **a location determination system, such as GPS**" whereas Bahl does not teach collecting physical

road location data using location devices such as GPS together with data collected from the cellular network, but rather teaches collecting data only from the cellular network.

Amended claim 63 explicitly teaches "collecting **road traffic volume information** for each route in the relevant area **from external sources** " whereas Bahl does not teach collecting physical road traffic volume data, but teaches rather collecting data only from the cellular network, and does not teach using any external sources for data collection.

Another argument for allowing claim 41 over Bahl is presented below: As we stated before, Bahl teaches finding the path or route of a mobile unit "through the cells of the network". Since all the information Bahl uses to determine the route is the sequence of cells he does not differentiate between neighboring physical routes that have the same sequence and determines them to be the same route. Claim 41 teaches how to overcome this problem "... whereas the data is processed to overcome the problem of similar sequences for neighboring routes."

Claims 44, 45, 46, 51 and 66 have also been amended to correct informalities.

Claims Objected To by Office

The Office has objected to claims 42-46, 51, 53, 54, 58-62, 65 and 67 indicating that they would be allowable is rewritten in a form to include the limitations of the parent and any intervening claims. Claim 53 has been amended as requested to include the limitation of parent claim 41. The other claims depend either from claim 41 or 63 and as such, are in condition for allowance.

Conclusion

Applicant respectfully submits that the currently pending claims are in condition for allowance and respectfully requests that the case be processed to issuance. If the Office has any questions or if there are any actions that can be handled through an Examiner's Amendment, the applicant requests the Office to contact the attorney of record using the below-provided contact information.

Respectfully submitted,

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